

**Claims**

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What is claimed is:

- 1 1. A method of inhibiting or treating a tumor or infectious lesion in a subject,  
2 comprising:  
3 administering into or near a site of a tumor or infectious lesion in a subject  
4 an effective amount of an antigen presenting cell and an immunostimulatory  
5 cytokine or a nucleic acid encoding an immunostimulatory cytokine.
- 1 2. The method of claim 1, wherein the antigen presenting cell is a dendritic cell.
- 1 3. The method of claim 2, wherein the dendritic cell is selected from the group  
2 consisting of a CD34+-derived dendritic cell, a bone marrow-derived dendritic  
3 cell, a monocyte-derived dendritic cell, a splenocyte derived dendritic cell, a skin-  
4 derived dendritic cell, a follicular dendritic cell, and a germinal center dendritic  
5 cell.
- 1 4. The method of claim 1, wherein the dendritic cell is a CD34+-derived dendritic  
2 cell cultured in the presence of at least one factor selected from the group  
3 consisting of granulocyte colony stimulating factor, granulocyte macrophage  
4 colony stimulatory factor, tumor necrosis factor alpha, interleukin 4, the Flt-3  
5 ligand, and the kit ligand.
- 1 5. The method of claim 1, wherein the antigen presenting cell is selected from a  
2 group consisting of a Langherhans' cell, an interdigitating cell, a B cell, and a  
3 macrophage.
- 1 6. The method of claim 1, wherein the immunostimulatory cytokine is selected from  
2 the group consisting of interleukin-1 $\alpha$ , interleukin-1 $\beta$ , interleukin-2, interleukin-  
3 3, interleukin-4, interleukin-6, interleukin-8, interleukin-9, interleukin-10,  
4 interleukin-12, interleukin-18, interleukin-19, interleukin-20, interleukin-23,

5 interleukin-27, interleukin-1f3, interleukin-1f5, interleukin-1f6, interleukin-1f7,  
6 interleukin-1f8, interleukin-1f9, interleukin-1f10, interferon- $\alpha$ , interferon- $\beta$ ,  
7 interferon- $\gamma$ , tumor necrosis factor  $\alpha$ , transforming growth factor- $\beta$ , granulocyte  
8 colony stimulating factor, macrophage colony stimulating factor, granulocyte-  
9 macrophage colony stimulating factor, the Flt-3 ligand, and the kit ligand.

1 7. The method of claim 1, wherein the expression vector is a viral vector.

1 8. The method of claim 2, wherein the expression vector is selected from the group  
2 consisting of an adenoviral vector, an adeno-associated viral vector, a retroviral  
3 vector, a lentiviral vector, a herpes viral vector, and a vaccinia viral vector.

1 9. The method of claim 1, wherein the subject has a tumor selected from the group  
2 consisting of melanoma, hepatoma, adenocarcinoma, colorectal cancer, basal cell  
3 cancer, oral cancer, nasopharyngeal cancer, laryngeal cancer, bladder cancer, head  
4 and neck cancer, renal cell cancer, pancreatic cancer, pulmonary cancer, cervical  
5 cancer, ovarian cancer, esophageal cancer, gastric cancer, prostate cancer,  
6 testicular cancer, and breast cancer.

1 10. The method of claim 1, wherein the size of the tumor or infectious lesion is  
2 decreased.

1 11. The method of claim 1, wherein said administering step comprises injecting into  
2 the tumor or infectious lesion.

1 12. The method of claim 1, wherein said administering step comprises injecting the  
2 subject within the same organ as the tumor or infectious lesion.

1 13. A method of inhibiting or treating metastasis of a tumor in a subject, comprising:

2 administer into or near a site of a tumor in a subject an effective amount of  
3 an antigen presenting cell and an immunostimulatory cytokine or a nucleic acid  
4 encoding an immunostimulatory cytokine.

- 1 14. The method of claim 13, wherein the antigen presenting cell is a dendritic cell.
- 1 15. The method of claim 14, wherein the dendritic cell is selected from the group  
2 consisting of a CD34+-derived dendritic cell, a bone marrow-derived dendritic  
3 cell, a monocyte-derived dendritic cell, a splenocyte derived dendritic cell, a skin-  
4 derived dendritic cell, a follicular dendritic cell, and a germinal center dendritic  
5 cell.
- 1 16. The method of claim 13, wherein the dendritic cell is a CD34+-derived dendritic  
2 cell cultured in the presence of at least one factor selected from the group  
3 consisting of granulocyte colony stimulating factor, granulocyte macrophage  
4 colony stimulatory factor, tumor necrosis factor alpha, interleukin 4, the Flt-3  
5 ligand, and the kit ligand.
- 1 17. The method of claim 13, wherein the antigen presenting cell is selected from a  
2 group consisting of a Langherhans' cell, an interdigitating cell, a B cell, and a  
3 macrophage.
- 1 18. The method of claim 13, wherein the immunostimulatory cytokine is selected  
2 from the group consisting of interleukin-1 $\alpha$ , interleukin-1 $\beta$ , interleukin-2,  
3 interleukin-3, interleukin-4, interleukin-6, interleukin-8, interleukin-9, interleukin-  
4 10, interleukin-12, interleukin-18, interleukin-19, interleukin-20, interleukin-23,  
5 interleukin-27, interleukin-1f3, interleukin-1f5, interleukin-1f6, interleukin-1f7,  
6 interleukin-1f8, interleukin-1f9, interleukin-1f10, interferon- $\alpha$ , interferon- $\beta$ ,  
7 interferon- $\gamma$ , tumor necrosis factor  $\alpha$ , transforming growth factor- $\beta$ , granulocyte  
8 colony stimulating factor, macrophage colony stimulating factor, granulocyte-  
9 macrophage colony stimulating factor, the Flt-3 ligand, and the kit ligand.
- 1 19. The method of claim 13, wherein the expression vector is a viral vector.

- 1 20. The method of claim 13, wherein the expression vector is selected from the group  
2 consisting of an adenoviral vector, an adeno-associated viral vector, a retroviral  
3 vector, a lentiviral vector, a herpes viral vector, and a vaccinia viral vector.
- 1 21. The method of claim 13, wherein the subject has a tumor selected from the group  
2 consisting of melanoma, hepatoma, adenocarcinoma, colorectal cancer, basal cell  
3 cancer, oral cancer, nasopharyngeal cancer, laryngeal cancer, bladder cancer, head  
4 and neck cancer, renal cell cancer, pancreatic cancer, pulmonary cancer, cervical  
5 cancer, ovarian cancer, esophageal cancer, gastric cancer, prostate cancer,  
6 testicular cancer, and breast cancer.
- 1 22. The method of claim 13, wherein the size of the tumor or infectious lesion is  
2 decreased.
- 1 23. The method of claim 13, wherein the size of the metastasis is decreased.
- 1 24. The method of claim 13, wherein the number of the metastases is decreased.
- 1 25. The method of claim 13, wherein said administering step comprises injecting into  
2 the tumor or infectious lesion.
- 1 26. The method of claim 13, wherein said administering step comprises injecting the  
2 subject within the same organ as the tumor or infectious lesion.
- 1 27. A therapeutic composition comprising an antigen presenting cell and an  
2 immunostimulatory cytokine or a nucleic acid encoding an immunostimulatory  
3 cytokine.